

WHAT IS CLAIMED IS:

1. An LCD device comprising:
first and second substrates;
gate and data lines crossing each other to define a pixel region on the first substrate;
a pixel electrode on the pixel region;
a color filter layer on the second substrate, the color filter layer having a hole ;
a common electrode on the color filter layer;
a liquid crystal layer between the first and second substrates; and
first and second polarizers on the first and second substrates, a direction of the polarizer having same direction of the hole.
2. The device of claim 1, wherein the liquid crystal layer has a negative dielectric anisotropy.
3. The device of claim 2, wherein the liquid crystal layer further includes chiral dopant.
4. The device of claim 1, wherein the hole has a shape one of a cross-shape, horizontally, vertically, diagonally and in X-shape.
5. The device of claim 1, wherein the hole is formed by etching the color filter layer.
6. The device of claim 1, further comprising a dielectric protrusion on the center of the hole.
7. The device of claim 1, further comprising an electric field inducing window on the center of the hole.
8. The device of claim 7, wherein the electric field inducing window is formed in the common electrode.

9. The device of claim 1, wherein the pixel electrode is overlapped with the data line.

10. The device of claim 1, further comprising an overcoat layer on the color filter layer.

11. The device of claim 1, further comprising a common auxiliary electrode at the periphery of the pixel electrode.

12. The device of claim 11, wherein the common auxiliary electrode overlaps with the pixel electrode.

13. A liquid crystal display device, comprising:

first and second substrates facing each other, at least one of the first and second substrates having a polarizer on an external surface thereof, wherein the polarizer has a first axis of polarization with a first direction;

gate and data lines crossing each other to define at least one pixel region on a surface of the first substrate;

a pixel electrode on the pixel region;

a color filter layer on a surface of the second substrate facing the first substrate, the color filter layer having a groove therein, wherein a long side of the groove extends in the first direction;

a common electrode on the color filter layer; and

a liquid crystal layer between the first and second substrates.

14. The device of claim 13, wherein the other of the first and second substrates has an additional polarizer on an external surface thereof, wherein the additional polarizer has a second axis of polarization in a second direction.

15. The device of claim 14, wherein the first direction and second direction are substantially parallel.

16. The device of claim 14, wherein the first direction and the second direction are substantially perpendicular.

17. The device of claim 14, wherein the color filter layer has an additional groove, wherein a long side of the additional groove extends in the second direction.

18. The device of claim 17, wherein the groove and the additional groove overlap.

19. The device of claim 18, wherein the groove and the additional groove overlap in a cross shape.

20. The device of claim 13, wherein the liquid crystal layer has a negative dielectric anisotropy.

21. The device of claim 20, wherein the liquid crystal layer further includes chiral dopant.

22. The device of claim 13, wherein the first direction is substantially parallel to the data lines.

23. The display device of claim 13, wherein the first direction is substantially parallel to the gate lines.

24. The device of claim 13, wherein the first direction is at an angle with respect to the data lines.

25. The device of claim 13, wherein the first direction is not parallel to the gate lines or the data lines.

26. The device of claim 14, wherein the first direction is substantially parallel to the data lines and the second direction is substantially parallel to the gate lines.

27. The device of claim 14, wherein the first direction is substantially parallel to the gate lines and the second direction is substantially parallel to the data lines.

28. The device of claim 14, wherein the first direction is not parallel to the data lines or the gate lines and the second direction is not parallel to the gate lines or the data lines.

29. The device of claim 13, wherein the groove is formed by etching the color filter layer.

30. The device of claim 13, further comprising a dielectric protrusion corresponding to the center of the groove.

31. The device of claim 13, further comprising an electric field inducing window corresponding to the center of the groove.

32. The device of claim 31, wherein the electric field inducing window is formed in the common electrode.

33. The device of claim 13, wherein the pixel electrode is overlapped with the data line.

34. The device of claim 13, further comprising an overcoat layer on the color filter layer.

35. The device of claim 13, further comprising a common auxiliary electrode at the periphery of the pixel electrode.

36. The device of claim 35, wherein the common auxiliary electrode overlaps with the pixel electrode.